REGIMENT OF MEN

What a Trip Through Santa Fe Offices Reveals.

Thoroughly Organized Force of Over 1,200 Employees.

ROOMS ARE COMMODIOUS

Officers Now Have Well Equipped Offices.

System of Pneumatic Tubes for Messenger Service.

Building Is Fireproof, But Protection Is Not Overlooked.

One not familiar with the general office buildings of the Santa Fe could hardly believe that 1250 persons are employed in the work in Topeka in addition to those who are employed in other cities such as Chicago, points on the lines west of Albuquerque, N. M., and on the lines south of Purcell, Okla. The lines south of this point are under the jurisdiction of the Gulf Line officers.

Number of people on the pay rolls of the different offices:

Freight department	27
Publicity department	2
Passenger department	41
General superintendent	22
General manager	14
Auditor of disbursements	102
Ticket auditor	152
Freight auditor	315
Chief engineer (system)	15
Chief engineer	34
Signal engineer	14
Superintendent of telegraph	65
Treasurer department	39
Legal department	8
Land department	4
General baggage agent	9
Car accountant	106
Watch inspector	139
Claim agent	10
Tax department	5
Secret service department	8
Custodians department	46
Total	1250

J. R. Koontz, General Freight Agent.

In considering this large clerical force in the general offices, it is almost equivalent to a regiment of soldiers or even more. The first floor of this building contains the office of J. F. Jarrell, the publicity agent, who finds constant employment for a stenographer. This office is just inside the door and at the right as one enters. Other than this office, the engine room, the mail and express rooms are located on this floor. A large part of this floor is not in use but will be divided into sections and be used as a place for filing the records of the several departments.

The Passenger Department.

The offices of J. M. Connell, the general passenger agent, and J. R. Koontz the general freight agent, are located on the second floor. The private offices of each are located in the front of the building with additional rooms in the rear for the clerical forces. Mr. Connell employs a force of forty-one persons. This department regulates or computes the rates, issues tickets of the different characters and performs other duties pertaining to the passenger traffic. It is also the duty of this department to arrange for equipment of the regular passenger trains and special trains whenever needed. They also arrange for excursions, special rates from one point to another for the various reasons and much other work along this line.

In the office of Mr. Koontz, twenty-seven persons are employed. The work of this department is similar to the passenger department in many ways. This department prepares the tariff circulars for the government of the agents along the line, classifies the different articles of shipment, arranges for the loading, unloading and forwarding freight shipments and other work of this character.

Office of General Manager.

The offices of C. W. Kouns, the general manager, and R. J. Parker, general superintendent of the Eastern Grand division, are located on the third floor of the new building. Fourteen persons are employed in the office of Mr. Kouns and twenty-two in the office of Mr. Parker.

The offices of Mr. Kouns and the employees of his department are located on the south side of the building and those of Mr. Parker on the north side. These offices begin in the front and extend to the rear end of the building. The private suite of the head of each respective department is located in the front of the building. Next comes the office of the assistant, then the chief clerk and last the desk and offices of the clerical forces.

Between the private suite of Messrs. Kouns and Parker, is a large room which is used jointly for holding important meetings with persons or officers. It is frequently necessary that these officers hold conferences with other officers of the system, and from all points along the line, with citizens from cities along the lines who desire some special favor of the system or to form some kind of an agreement with the system.

In addition to that, it is frequently necessary to hold conferences with representatives of the employees of the system and numerous occasions of this character. For this reason this room is maintained and is located between these private suites that it might be used by either when necessary.

The office of E. H. Bunnell, auditor of disbursements and his clerical force, occupies the fourth floor. A total of 103 persons are employed in this department. Mr. Bunnell's office is located in the front of the building and the clerical force occupies the remainder. The force in this office receives the records of the expenditures of all character. The records are forwarded to this office from every point or source of the system, through to respective departments for which the expenditure was made. This is the final audit of funds paid out, before the report is forwarded to the office of the general auditor which is located in Chicago.

Ticket Auditor Has Two Floors.

The fifth and sixth floors are occupied by J. F. Mitchell, the ticket auditor and his force which numbers 152 persons. Mr. Mitchell's office is located on the fifth floor and in the front end of the building. Reports are received in this office from every ticket office on the system. These offices include those at the passenger stations, offices that are located in the business districts, which are known as city offices, and the offices which are located in cities which are not on the lines of the company. A number of these offices are located far from the lines of the company. As an example of this, the eastern terminal of the Santa Fe system is in Chicago, but a ticket office is located in St. Louis, New York, and other principal cities where the passenger department believes an office can be operated and secure enough business to warrant such.

A number of large ticket offices send reports of ticket business to this office every day while a larger number send in reports one each week. All offices make a general report at the end of each month.

The persons employed in Mr. Mitchell's office must examine these reports to see that the proper amount has been collected through the sale of the tickets, that the proper distribution has been made on tickets to persons for passage over more than one railroad system. Many other things of this character are included in the duties of this office.

The seventh floor is occupied by W. W. Strickland the freight auditor and his force and the eighth floor is occupied by the office of the assistant freight auditor, from which Mr. Strickland has been promoted and the force of both offices is under the jurisdiction of Mr. Strickland and numbers 315 persons. More than double the number of persons are employed in this department than in any other department in the general offices.

When one considers that the way bill covering every shipment of freight that is made, together with weekly and monthly reports of every freight office on the system, and some daily, is forwarded to this office for audit—one does not wonder that such a large force is employed in this department. In addition to that, the agent makes a weekly report of all shipments received and forwarded and also a monthly report of all freight business. With these reports are others which cover shortages, damages in shipment, loss in transit, distribution of money collected where shipments are made over more than one line and many other reports of this character.

The Freight Department.

The freight department and the auditing department connected with it is probably one of the most important on an entire railroad system. Delivering freight from one point to another is the principal object of the common carrier. This was one of the reasons for introducing a new system of transportation, which was formerly practiced with the use of beasts of burden. The horse, the mule or ox proved insufficient to supply the demands of a progressive country. It was impossible to transport the freight without an enormous expense and many other disagreeable features. Hence the invention of the locomotive and the gigantic railroad systems of the country.

Through the advancement of railroads and steamship lines as a method of transportation and for hauling freight from point to point the necessity of maintaining large clerical forces to handle this traffic and the auditors force to see that the correct rate and classification has been made, results.

That is why the large office forces are maintained by every railroad system and why the large force and attractive office building is maintain in Topeka by the Santa Fe system.

The ninth floor is occupied by the department of freight claim auditor with Harry C. Pribble in charge. The force in this office receives the communications concerning claims against the railroad company for loss or damage, failure to deliver or claims accruing for any other reason to freight while in transit or while under the possession of the company on the shipping docks or in the warehouses of the company.

The top floor is unfinished but will be fitted up as a record room to accommodate the files of the various departments which are held for frequent reference.

Even though this new building is completed and every available bit of space is being utilized, one must not think that the old building is deserted. The same activity is noticed in this building as before. Of course the force in this building has been greatly reduced because of the removal to the new building, but even at that the old place is practically as active as far as vision will indicate. Every available bit of space is or will be utilized and there is reason to believe that the need of additional office room will be felt within a short while—perhaps within five years.

Up to Date Heating Plant.

The basement of this structure is occupied by the old heating plant which was formerly used in heating the building but which has been deserted since the mains of the Edison company have been connected with the mains in these buildings. However, this heating plant is maintained and held in readiness to be used in emergency should the Edison company be unable to furnish the necessary heat for any reason whatever. In addition to this is the other mechanical arrangements and machinery which is necessary in a building of this character. All the other available space in this basement is devoted to filing rooms and this is in such demand that filing cases even are to be found in the corridors.

The first floor, or that above the basement, is occupied by the offices of E. L. Copeland, the secretary and treasurer. This department also includes that of James Moore, the veteran paymaster. These departments combined employ thirty persons regularly and about fifteen others during two weeks out of each month.

One of the greatest duties of this department, especially the one which pleases the employees of the system, is that of writing out the pay checks of the employees of the entire system and checks or drafts for all other expenditures. While this office employs but thirty persons regularly, a force of fifteen other persons are employed two weeks out of each month to write out these checks. The pay rolls are made out and certified. After the officers of the several departments are convinced that these pay rolls are correct, the rolls are forwarded to this department and the force begins the two weeks duty of making out the checks. The employees of the general office receive their checks on the first day of each month and the others on the fifteenth day.

One could hardly conceive the work of fifteen persons constantly employed at writing out checks for money for two weeks and there is no occasion for wonder why the expense of a gigantic system of this character is great.

The offices of J. D. M. Hamilton, the claims attorney, also are on this floor. This force numbers ten persons who are engaged in settling claims against the company of numerous characters. This does not include the work which is involved in the department of freight claims but consist mostly of claims for personal damages.

The Law Department.

The law department, which is under the charge of William R. Smith as solicitor for Kansas is also located on this floor and numbers eight persons. Legal counsel and lots of it is necessary in the operation of a system of such magnitude and the number representing the legal department in this office is only a small part of the force that is retained on this proposition.

This office must attend to all business of the company which pertains to practically every subject that is encountered by persons in civil life and probably more.

R. J. Parker, General Superintendent.

The second floor of this old building contains the offices of C. S. Stevens, who is in charge of the signal department, George E. Rex, who is in charge of the tie and timber department, C. F. W. Felt, chief engineer of the Eastern Grand division and the office of C. A. Morse, chief engineer of the system. In addition to these is the office of L. M. Jones, superintendent of telegraph and the general office telegraph department. J. M. Meade, resident engineer of the system, also maintains offices on the floor.

A force of fourteen are employed in the office of the signal department. This force has general supervision of all signals along the lines of the system. The signals which control the operation of trains is one of the most important features. It is this department which has supervision over the Block signal system, which is used over the entire system. A manual block system is maintained while on some other systems an electrical block system is used. Opinions concerning the operation of the block system favor the manual block for the reason that its operation cannot be affected by the weather. The electrical block is often disabled during extreme weather conditions but this is impossible in the manual system and the only thing to prevent a successful operation is a disabled signal tower or disabled telegraph system and this would affect the electrical system similar to the manual system.

The employees of this department must be familiar with the weather conditions and the conditions of the signal system from one end of the line to the other.

The tie and timber department, which is under the direction of C. F. W. Felt, is responsible for the purchase of ties and lumber, which is required for use by this company.

The engineering department of the system and that representing the Eastern Grand division employs forty-nine persons. This department keeps the record of every bit of track, the tunnels, the mines and many other things along this line. Not only the records of the tracks and mines are known but they must have accurate information concerning the depths of the mines, the grade of the tracks, the degree of the curve and much other information which is unfamiliar to the average person in civil life.

The Telegraph Department.

The telegraph department, under L. M. Jones as superintendent, employs sixty-five persons. A majority of this number are telegraph operators and a number of them can be found on duty at all hours of the day. The work in this department has never been stopped since it was first established. It is necessary that several operators be on duty at night to receive reports and correspondence for the various officers and to transmit replies or other communications for points along the line. It is necessary that this work be continued through the night that it be disposed of and ready for delivery at the beginning of office hours the next day. The volume of business through this office is so great, that it would be practically impossible to transact all the business during the day, because a large number of telegraph wires would be necessary and in addition to that there is correspondence and reports received which could not be handled conveniently during the day time. The telegraph department is on the second floor, but Mr. Jones maintains his office on the third floor.

The third floor is used by the office of John W. Nowers, the car accountant, which employs 106 persons. This department receives daily reports from stations along the line which contains the number and initial of every car on hand, every car that has been received and every car that has been forwarded. With the aid of this report, it is possible to compile the performance of every car, the number of tons hauled, the number of miles hauled and any other information concerning any car of the system. It is also possible to learn the number of cars of other systems which are in use along the lines of the system and the number of Santa Fe cars which are in use on other lines.

The fourth floor contains the office of Pat Walsh, the general baggage agent, Ed Cartledge, the tax commissioner and Harry Hobson, the signal lamp inspector of the system. Nine persons are employed in the general baggage agent's department. Pat Walsh, the veteran baggage agent, is in charge and one of the best known officers of the system.

Five persons are employed in the office of Mr. Cartledge of the tax department. The persons in this department look after the interests of the company to see that the property is not assessed at a greater valuation, to see that the taxes in each county are properly computed and to recommend the payment of the same. The taxes of the Santa Fe system amounts to more than $4,000,000 per year. The company pays one-sixth of the taxes of Shawnee county. To consider the affairs concerning the property of the company in Shawnee county alone and to consider that the officers must give every other county through which the railroad company maintains lines in the twelve states, one wonders that five persons are able to accomplish so much work.

The office of the land department employs four persons. It is up to this department to secure land for additional right of way for building tracks, land for erecting buildings and for any other reason for which additional land is required. These persons must be competent judges of the value of such lands, have accurate knowledge of the titles and abstracts of land and in fact have all the knowledge of a real estate agent, abstracter or any other person engaged in business pertaining to this subject.

The office of H. S. Montgomery, general watch and clock inspector, is also located on this floor. This department employs 139 persons. A large portion of this number are employed at points along the line as division inspectors. Inspectors must be employed at all division points or junctions along the line. The accuracy of the watch of the trainmen is an absolute necessity. By this it is possible to operate trains with a reduced danger of collisions and enables the train crews to get over the division with their train with more accuracy than would be possible were less attention given to the time pieces.

The watches of the men in train service must be tested thoroughly once each year, must undergo a through inspection once each month and a less important inspection once each month. In addition to that, each man in train service must compare his watch with a standard clock before beginning each trip and must register its condition on blanks maintained for that purpose. All these reports are kept on file in this department.

The Secret Service.

The secret service department, under the direction of H. H. Germain, is responsible for the arrest and prosecution of persons who commit unlawful acts against the railroad company, such as stealing property, breaking into cars, and practically every infringement against the laws of the state and community which are described in the statute books.

Mr. Germain has a national reputation as a criminal catcher and as one who is responsible for the arrest and conviction of persons guilty of crime against the company. Mr. Germain gained considerable notoriety among the police or secret service men of the country when he arrested and convicted L. C. (Slippery) Letts a number of years ago. This man was employed as a station agent at Princeton, a small station between Lawrence and Ottawa. The depot with all its contents was burned, but under such conditions as to arouse suspicion. Mr. Germain began an investigation and soon learned that a number of tickets which had been on hand at this station were in the hands of ticket scalpers in Kansas City and other points, and also that a number had been sold and used. He began a search for Letts and was finally successful in arresting him. Letts was taken to Ottawa and placed in prison to await trial but he escaped. He broke jail several times and was finally located at work as a telegraph operator, working on the Panama canal railroad. He was brought back and is now serving time in the state penitentiary of Missouri which is located at Jefferson City.

Mr. Germain and his force have been successful in making the arrest of a number of other notorious criminals. He employs eight persons in his office in the general office building but has men under his charge at all principal cities along the lines of the system.

Heating and Ventilating.

The heating and ventilating systems are strictly modern in every respect and the system used is not used in any other building in the city and not thought to have been installed in any building in the state.

This large building is heated by steam, furnished from the Edison Light, Heat and Power company's plant. A vacuum system with a Johnson service control is maintained. The steam enters the basement of the building through an eight-inch main and has a pressure of two pounds to the square inch. Through the use of the vacuum pump the steam is drawn to the top of the building and then down through the various floors until it reaches the pump in the basement.

During this system of travel, beginning with the entrance in the basement of the building, the steam is drawn through the pipes of the entire plant. The water which collects through condensation and the steam that remains uncondensed enters an economy coil. This coil is located under one of the giant ventilating fans and any heat that remains is drawn off and forced through the ventilating conduits and distributed through the building. Under the various steam coil systems which are usually used, a pressure of 45 to 50 pounds steam would be necessary to maintain a temperature equal to that which is maintained under the present system.

Thermostats are located in each room or department containing more than one room, which are set to maintain a desired temperature. The thermostats remain open and allow heat to enter the room until the desired temperature is reached and then closes automatically only to open when the temperature drops below the desired temperature. As a result, it is possible when artificial heat is required, to maintain a normal temperature in the room or department.

The steam enters the economy coil at a temperature of about 212 degrees

J. M. Hayes, Custodian.

but this is reduced to from ninety to one hundred degrees before released and permitted to enter the sewer.

The more familiar system of heating is maintained in the old building and a much higher steam pressure is necessary. Under the gravity system such as maintained in this system a high pressure is necessary that the condensation be forced out of the steam pipes. The condensation is forced out at the same pressure as under the new system and must enter a catch basin and must be cooled before it is allowed to enter the sewer. The cooling process is required by the city ordinances.

By entering the economy coil, under the ventilating fans, the heat is drawn off and used in heating the building instead of being allowed to waste such as is the condition in the heating plant under the old building. In connection with this, is a tank for heating water which is conveyed through the water system to the wash basins in the various private offices of the departments. This tank is equipped with an appliance which also regulates the temperature of water, which is maintained at one hundred degrees. It works automatically and closes and opens as occasion demands. The engineer's attention is not required.

The Ventilation System.

The atmosphere in the building undergoes a constant change. Fresh air enters the various rooms from a register near the ceiling and is drawn out through a register near the floor. The officers in charge of the work of preparing the plans for the building and the architect realized that fresh air is absolutely necessary to good health and that good health is necessary to one in order that he or she give their employers the best efforts.

The ventilating system in many office buildings is sadly neglected. On account of this the persons who are employed therein suffer with bad health, are subject to attacks of disease, which might be averted.

The oxygen in the atmosphere in an office is soon consumed by the persons who are at work and soon becomes foul, ill smelling and dangerous to health. Persons who enjoy good health are required to breath the same atmosphere as those who are not healthy and a spread of disease of every character, results from which some of the force might be suffering. Physicians give this as one of the causes of the increase in the number of persons who are suffering with tuberculosis and many other forms of dreaded affliction.

Two fans, each with a capacity of 19,000 cubic feet of air per minute are installed to force fresh air out through the conduits and distribute through the different rooms. Those same fans draw off the foul air through a register near the floor thus causing the atmosphere to undergo a constant change. These fans are attached to motors. The fresh air ventilation fan is propelled by a motor having twenty-six horse power and the exhaust fan is propelled

J. M. Connell, General Passenger Agent.

with a motor having 23 horse power.

The air is forced into the rooms and drawn off through ducts laid between the walls which are sealed tight and will not permit air to escape except through the registers. In addition to these methods of ventilation other ventilators are attached to the windows which are controlled by the persons within the room.

Under this system of ventilation it is practically impossible for one to become affected by disease through the spread of microbes exhaled by unhealthy persons in the room who might be suffering with such, which might be caused by breathing impure air.

Complete Water System.

Persons employed in this new building are served with drinking water which is cooled in the basement of the building. The temperature is maintained at a degree ranging from 38 to 42 Fahrenheit. The old style water coolers, which are usually maintained, are unknown in this building. The ice man is a stranger and the cooling system is controlled by the engineer, who operates a small ice machine.

An ice machine propelled by a motor cools the water and forces it through the building.

Ammonia tanks, charged with a pressure of 150 pounds to the square inch, are attached to this machine. A valve permits the ammonia to pass from the receiving tanks in such small quantities that it forms a gas which cools the water to the desired temperature. The ammonia is then compressed, forced into the condensing coil at a pressure of 125 pounds to the square inch and then undergoes the same process, thereby being in constant use. There is but little waste or consumption of ammonia under this process.

The water is forced out through pipes that extend to every room and corridor of the building. It is kept in constant circulation, thereby enabling the engineer to maintain a temperature which will differ but a few degrees during the day. This machinery is operated three out of every twenty-four hours. It is operated one and one-half hours in the morning, beginning with the office hours of the employees in the building and for the same period during the latter part of the afternoon.

Every precaution necessary for the health of the persons who are employed in the building is taken. In addition to the cooling process, all water is sterilized before it passes through the ice machine. It enters the building through a main connected with the city water plant and is filtered. It is then heated to a temperature of 212 degrees and then forced into the storage tank. It is pumped from the storage tank through the ice machinery, thereby completing the cooling process. From there it is forced through the building only to return to the storage tank and through the same process repeatedly. This machinery replenishes the water supply as fast as the water is drawn off.

City Water Insufficient.

The water system of the city is not sufficient for a building of this character. The pressure forced through the mains, although considered sufficient for use on the street level, is not great enough to be forced to the full height of the building. The city pumps can only force the water to the fourth stofy.

This leaves it up to the officers of the Santa Fe to maintain a water system for fire protection and to supply the lavatories and wash rooms throughout the building. This system is maintained by forcing the city water into a tank on top of the new building, which has a capacity of 27,000 gallons. This tank is kept from one-half to three-fourths full. Water from it is released to run out and supply the lavatories and wash basins. An automatic pump has been installed to keep this tank filled. The water is released and the pressure depends on gravity. It has an excessive pressure on the lower floor.

The basement of the building is six feet lower than the sewer level and a system of drainage is necessary. Water pipes are liable to break or other accidents are liable to occur which would flood the basement. An automatic pump has been installed to guard against such. It is located in the basement and connected with the power plant thus giving every assurance of service when necessary and preventing danger of flooding the lower floor, which will be used as a place for filing records which are considered invaluable and which are constantly in use.

The Lighting System.

The lighting system in the magnificent structure is beyond the conception of the usual individual who is not familiar with such necessities. Current from the Edison plant enters the building through conduits into one of the best switch boards in the country.

The switch board was made in the local shops and under the direction of the most expert electricians which are employed on the system. It is equipped with all the latest devices and is good to look at as well as being a wonderful piece of mechanism. About 350 amperes are used continuously.

More than 1,200 lights, eleven motors with a capacity of 210 horsepower and three elevators are supplied with current which circulates through this switch board.

The lights are suspended from the ceiling throughout the entire building and are equipped with shades which have a wonderful power of reflection thus increasing the power of the incandescent lights sufficient to furnish plenty of light under any condition.

The lighting system is one of the most complete in this section of the country. The lights are connected with push button switches which are the most complete and convenient appliance used. In addition to the lights are 29 plugs on each floor which are used for fans or for motors attached to adding machines. These plugs are attached to the wall and just far enough from the ceiling for convenience and high enough to prevent destruction.

Special care was taken while installing this electrical system and every precaution to prevent fire, was observed. All joints are thoroughly insulated and the wires are incased in conduits in the walls or between the floors which are sealed tightly, thus making it practically impossible to cause a wire to become short circuited or to permit a blaze should such occur. The underwriters examined the building after it was completed and announced that all regulations had been complied with and that the system was a model of perfection.

Excellent Fire Protection.

Realizing the probable loss of life should a fire result in this building the architects made ample provision for a system whereby all will have an opportunity to escape. Of course, a fire in this building would entail a great loss through the destruction of records and correspondence but the lives of the persons must first be considered.

A fire escape made of steel has been put in place at the rear of the building. The ladder or stairs are four to five feet wide, and with the use of the three elevators and the stairs inside the building it will be possible for every person to escape in safety except on rare occasion which are not likely to result in a place of this character. Such conditions rarely occur excepting in congested business districts. Such as this is not liable to occur in this building because of the location of the other buildings in relation to the general office building.

The new building is separate from the old building and a space of about 20 feet divides them. The Memorial building is located on the south side and another space divides these buildings. The general office building extends to the alley between Kansas avenue and Jackson streets and this will allow a large space between this and any other building that might be erected on the opposite side of the alley. This makes congestion absolutely impossible and increases the safety of the persons employed therein. In addition to these features, the building is as near fire proof as is possible to make it.

In addition to these safety appliances the building will be equipped with hand grenades, and fire extinguishers of different characters. Large water pipes, equipped with hydrants, are also put in and with a large supply of fire hose, equipped with nozzles, it will be possible for the persons in the building to extinguish a small fire as soon as it starts or to assist the city fire depart-

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General Offices A., T. & S. F. (New Building in Background.)